

Listing of Claims

1. (Previously presented) An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising an elongate member having opposed proximal and distal ends, a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, hooked traction elements on at least a region of said surface, wherein said hooked traction elements are of unitary construction with said tissue engaging contact surface, said insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions.

2. (Original) The insert of claim 1 wherein said molded, hooked traction elements are configured to have at least one crook.

3. (Original) The insert of claim 1 wherein said molded, hooked traction elements are configured to have at least two crooks.

4. (Withdrawn) The insert of claim 1 wherein said molded, hooked traction elements are configured to have a mushroom-like shape.

5. (Previously presented) An insert according to claim 1, wherein said molded, hooked traction elements are not more than about 1 mm in height.

6. (Previously Presented) The insert of claim 5 wherein said

molded, hooked traction elements are not more than about 0.5 mm in height.

7. (Previously Presented) The insert of claim 5 wherein said molded, hooked traction elements are not more than about 0.3 mm in height.

8. (Previously Presented) The insert of claim 5 wherein the density of said molded, hooked traction elements on said surface region is at least about $100/\text{cm}^2$.

9. (Previously Presented) The insert of claim 5 wherein the density of said molded, hooked traction elements on said surface region is at least about $130/\text{cm}^2$.

10. (Previously Presented) The insert of claim 5 wherein the density of said molded, hooked traction elements on said surface region is at least about $260/\text{cm}^2$.

11. (Previously Presented) The insert of claim 5 wherein the density of said molded, hooked traction elements on said surface region is at least about $300/\text{cm}^2$.

12. (Previously presented) An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising an elongate member having opposed proximal and distal ends, a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, twin-crooked traction elements on at least a region of said surface, said insert further comprising a back surface opposite to said

contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions, wherein said traction elements are not more than about 0.4 mm in height and have a density on said surface region of at least about $130/\text{cm}^2$.

13. (Previously presented) An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising an elongate member having opposed proximal and distal ends, a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, single-crooked traction elements on at least a region of said surface, said insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions, wherein said traction elements are not more than about 0.3 mm in height and have a density on said surface region of at least about $260/\text{cm}^2$.

14. (Previously presented) An insert according to claim 22, wherein said traction elements are not more than about 0.3 mm in height and have a density on said surface region of at least about $300/\text{cm}^2$.

15. (Previously presented) An insert according to claim 1 wherein when said insert is attached to said jaw, a tractive force of between about 4 to about 10 pounds is provided on a vessel clamped by the clamp.

16. (Original) The insert of claim 15 wherein said tractive force is between about 6 to about 8 pounds.

17. (Previously presented) An insert according to claim 1 wherein when said insert is attached to said jaw, a tractive force of between about 1.5 to about 2.5 pounds is provided on a vessel clamped by the clip.

18. (Original) The insert of claim 17 wherein said tractive force is between about 1.5 to about 2 pounds.

19. (Previously presented) A surgical instrument comprising at least one jaw and an insert attached to the jaw, the insert comprising an elongate member having opposed proximal and distal ends, a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of molded, hooked traction elements on at least a region of said surface, and the hooked traction elements being of unitary construction with the clamping surface, said insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions.

20. (Original) The surgical instrument of claim 19 wherein said molded, hooked traction elements are configured to have at least one crook.

21. (Original) The surgical instrument of claim 19 wherein said

molded, hooked traction elements are configured to have at least two crooks.

22. (Withdrawn) The surgical instrument of claim 19 wherein said molded, hooked traction elements are configured to have a mushroom-like shape.

23. (Previously presented) A surgical instrument according to claim 19, wherein said molded, hooked traction elements are not more than about 1 mm in height.

24. (Previously Presented) The surgical instrument of claim 23 wherein said molded, hooked traction elements are not more than about 0.5 mm in height.

25. (Previously Presented) The surgical instrument of claim 23 wherein said molded, hooked traction elements are not more than about 0.3 mm in height.

26. (Previously Presented) The surgical instrument of claim 23 wherein the density of said molded, hooked traction elements on said surface region is at least about $100/\text{cm}^2$.

27. (Previously Presented) The surgical instrument of claim 23 wherein the density of said molded, hooked traction elements on said surface region is at least about $130/\text{cm}^2$.

28. (Previously Presented) The surgical instrument of claim 23 wherein the density of said molded, hooked traction elements on said surface region is at least about $260/\text{cm}^2$.

29. (Previously Presented) The surgical instrument of claim 23 wherein the density of said molded, hooked traction elements on said surface region is at least about $300/\text{cm}^2$.

30. (Previously presented) A surgical clamp comprising at least one jaw comprising an elongate member having opposed proximal and distal ends, a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on at least a region of said surface, wherein said hooked traction elements are of unitary construction with said tissue engaging contact surface, said insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions and wherein a tractive force of between about 4 to about 10 pounds is provided on a vessel clamped by the clamp.

31. (Original) The surgical clamp of claim 30 wherein said tractive force is between about 6 to about 8 pounds.

32. (Previously presented) A surgical clip comprising at least one jaw comprising an elongate member having opposed proximal and distal ends, a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on at least a region of said surface, wherein said hooked traction elements are of unitary construction with said tissue engaging contact surface, said insert further comprising a back surface opposite to said contact surface, and

a jaw attachment member on the back surface , wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions and wherein a tractive force of between about 1.5 to about 2.5 pounds is provided on a vessel clamped by the clip.

33. (Original) The surgical clip of claim 32 wherein said tractive force is between about 1.5 to about 2 pounds.

34. (Previously presented) An insert according to claim 1, wherein said hooked traction elements are on at least a region of said surface at a density on said surface region of at least about $100/\text{cm}^2$.

35. (Original) The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $130/\text{cm}^2$.

36. (Original) The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $260/\text{cm}^2$.

37. (Original) The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $300/\text{cm}^2$.

38. (Previously presented) A surgical instrument according to claim 19, wherein the plurality of hooked traction elements are on at least a region of said surface at a density on said surface region of at least about $100/\text{cm}^2$.

39. (Original) The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $130/\text{cm}^2$.

40. (Original) The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $260/\text{cm}^2$.

41. (Original) The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $300/\text{cm}^2$.

42. (Previously presented) An insert according to claim 1, wherein said traction elements are not more than 1 mm in height.

43. (Original) The insert of claim 42 wherein said hooked traction elements are not more than about 0.5 mm in height.

44. (Original) The insert of claim 42 wherein said hooked traction elements are not more than about 0.3 mm in height.

45. (Previously presented) A surgical instrument according to claim 19, wherein said traction elements are not more than 1 mm in height.

46. (Original) The surgical instrument of claim 45 wherein said hooked traction elements are not more than about 0.5 mm in height.

47. (Original) The surgical instrument of claim 45 wherein said hooked traction elements are not more than about 0.3 mm in height.

48. (Previously presented) A method of occluding a vessel or other body conduit comprising the steps of: (a) providing a jaw-type surgical instrument comprising at least one jaw and an insert attached to the jaw, the insert comprising an elongate member having opposed proximal and distal ends, a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of molded, hooked traction elements on at least a region of said surface, wherein said hooked traction elements are of unitary construction with said clamping surface, said insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions; (b) contacting said clamping surface with a vessel or other body conduit; and (c) actuating said instrument to occlude said vessel or other body conduit.

49. (Previously presented) A method of grasping tissue comprising the steps of: (a) providing a jaw-type surgical instrument comprising at least one jaw and an insert attached to the jaw, the insert comprising an elongate member having opposed proximal and distal ends, a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of molded, hooked traction elements on at least a region of said surface, wherein said hooked traction elements are of unitary construction with said contact surface, said

insert further comprising a back surface opposite to said contact surface, and a jaw attachment member on the back surface, wherein said contact surface and said back surface extend between said opposed proximal and distal ends and face opposite directions; (b) contacting said clamping surface with tissue; and (c) actuating said instrument to grasp said tissue.

50. (Canceled)

51. (Previously presented) The insert of claim 1, wherein said insert comprises an overmold having first side and a second side opposite from said first side, and wherein said compliant cushion is fixed to said first side of said overmold and said jaw attachment member is fixed to said second side of said overmold.

52. (Currently amended) The insert of claim 1, wherein said insert comprises a first overmold and a second overmold together defining a first side and a second side opposite from said first side, wherein said compliant cushion is fixed to said first side and said jaw attachment member is fixed to said second side, and wherein said second overmold is made from an elastomer having a shore durometer rating of between about 2A and about 95A, and wherein said first overmold is made from an elastomer having a shore durometer rating of between about 20A and about 95A, and wherein said first overmold is more rigid than said second overmold.

53. (Currently amended) The insert of claim 52, wherein said second overmold defines said first side and said first overmold

defines said second side, and wherein said jaw attachment member extends from said first overmold at said second side ~~surface~~.

54. (New) The insert of claim 3, wherein each hook comprises a single stem extending from said tissue-engaging contact surface, and wherein said two crooks extend in opposite directions from said single stem.